

Notice of Allowability

Application No.

10/065,934

Examiner

Sam Bhattacharya

Applicant(s)

SUGAR ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed on April 4, 2005.
2. ☒ The allowed claim(s) is/are 16,18,20 and 21.
3. ☒ The drawings filed on 02 December 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20050616</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>20050105</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Andrew Floam on June 16, 2005.

The application has been amended as follows:

Claim 20 is amended to read as follows:

20. (amended) A method for communication of signals occurring in multiple channels in a frequency band, comprising:

downconverting energy in the frequency band including energy in multiple channels in which multiple signals are transmitted in accordance with the same communication protocol and producing a baseband receive signal representative thereof;

converting the baseband receive signal to a digital receive signal;

~~demodulating the digital receive signal to recover multiple receive data~~ baseband demodulating the digital receive signal that represents receive signals for corresponding channels in the frequency band according to the communication protocol to recover multiple receive data, each receive data associated with a corresponding channel in the frequency band;

baseband modulating each of multiple transmit data according to the communication protocol to produce a plurality of digital transmit signals to be simultaneously transmitted in corresponding channels in the frequency band according to the same communication protocol, to

thereby simultaneously support multiple channels in the frequency band of the same communication protocol;

converting the plurality of digital transmit signals to analog transmit signals for upconversion by the radio transceiver; and

upconverting the plurality of analog transmit signals each to be transmitted in a corresponding one of the multiple channels in the frequency band.

Allowable Subject Matter

2. Claims 16, 18, 20 and 21 are allowed.

3. The following is an examiner's statement of reasons for allowance: the prior art of record fails to disclose a combination of elements in a radio transceiver system, including a baseband signal processing section coupled to the ADC and to the DAC that baseband demodulates the digital receive signal to recover multiple receive data associated with corresponding channels in the frequency band and that modulates multiple transmit data to produce digital transmit signals for processing by the DAC and transmission by the radio transceiver in corresponding channels in the frequency band, wherein the baseband signal processing section performs baseband modulation according to a communication protocol for each of multiple transmit data for transmission by the radio transceiver in corresponding channels in the frequency band, and performs baseband demodulation according to the communication protocol of the digital receive signal representing receive signals for corresponding channels in the frequency band, to thereby simultaneously support multiple channels in the frequency band of the same communication protocol, as in claim 16; and a combination of steps in a method for communication of signals

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occurring in multiple channels in a frequency band, including baseband demodulating the digital receive signal that represents receive signals for corresponding channels in the frequency band according to the communication protocol to recover multiple receive data, each receive data associated with a corresponding channel in the frequency band, and baseband modulating each of multiple transmit data according to the communication protocol to produce a plurality of digital transmit signals to be simultaneously transmitted in corresponding channels in the frequency band according to the same communication protocol, to thereby simultaneously support multiple channels in the frequency band of the same communication protocol, as in claim 20.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Bhattacharya whose telephone number is (571) 272-7917. The examiner can normally be reached on Weekdays, 9-6, with first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sb


SONNY TRINH
PRIMARY EXAMINER